S 11
.3368
77

United States
Department of
Agriculture

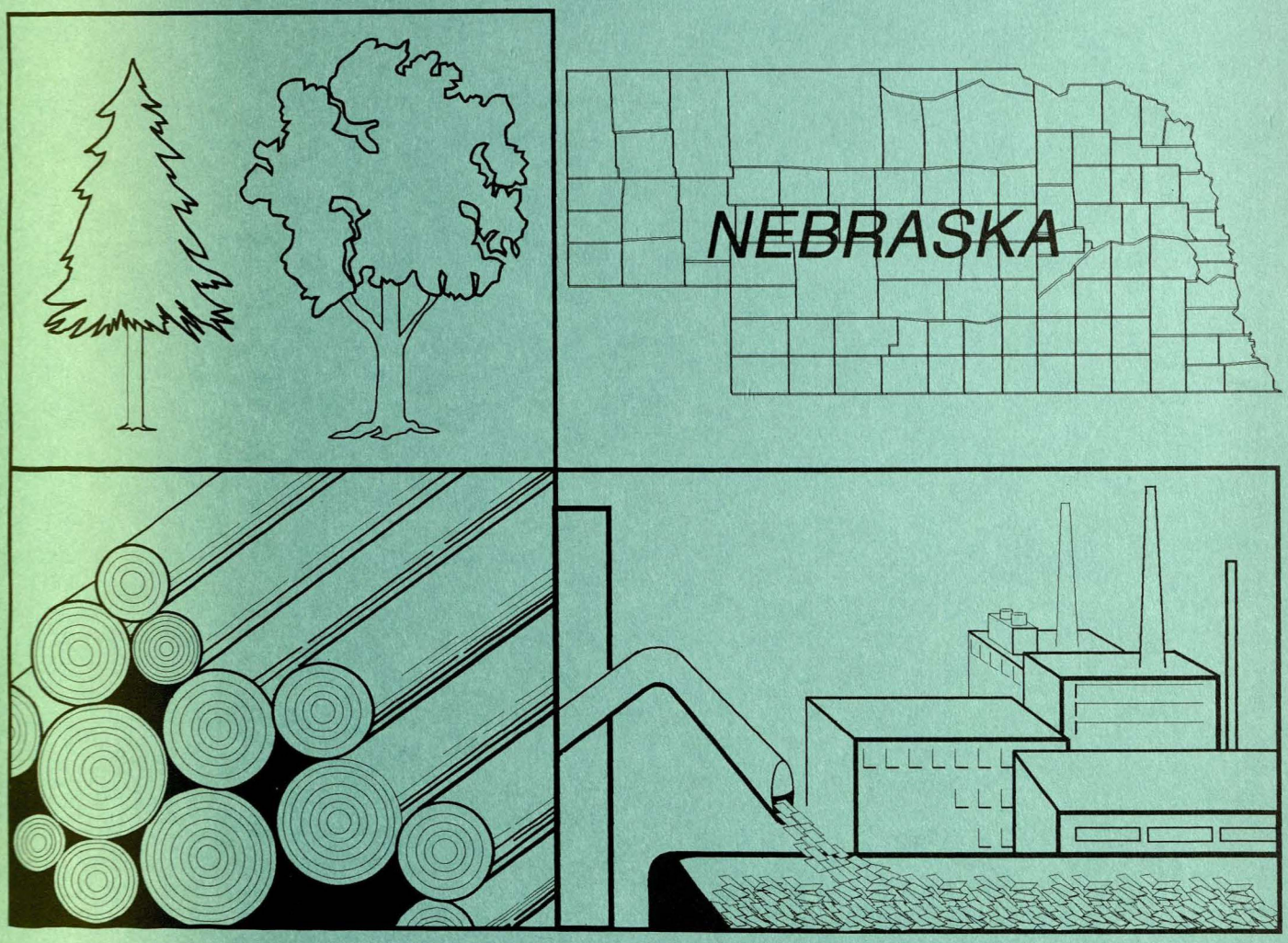
Forest
Service

North Central
Forest Experiment
Station

Resource Bulletin
NC - 177

Nebraska Timber Industry - An Assessment of Timber Product Output and Use, 1993

Ronald L. Hackett and Dennis M. Adams



North Central Forest Experiment Station
Forest Service—U.S. Department of Agriculture
1992 Folwell Avenue
St. Paul, Minnesota 55108
Manuscript approved for publication October 4, 1996
1996

CONTENTS

Page

Highlights 1
Primary Wood-Using Industry 1
  Industrial Roundwood Production 2
  Timber Removals for Industrial Roundwood 2
  Primary Mill Residues 3
Appendix 4
  Study Methods 4
  Definition of Terms 4
  Common and Scientific Names of Tree Species
    Mentioned in This Report 7
  Table Titles 7
  Tables 8

FOREWORD

This bulletin reports findings of a survey of all primary wood-using mills in Nebraska in 1993 and details the industry's size and composition, its use of roundwood, and its generation and disposition of wood residues. Such detailed information is necessary for intelligent planning and decisionmaking in wood procurement, forest resource management, forest industry development, and forest research.

Special thanks are given to primary wood-using firms that responded to the survey and to the Nebraska Forest Service for canvassing the respondents. Their cooperation is greatly appreciated.

In this bulletin, all volumes are reported in product-specific standard units and/or cubic feet. When necessary, volumes reported by mills in nonstandard units were converted to standard units using regional conversion factors. Reported trends and changes in Nebraska's primary wood-using industry are based on comparisons with previous surveys of the State's primary wood-using industry conducted in 1980 and 1953. Row and column data of tables may not sum due to rounding, but data in each table cell are accurately displayed.

Nebraska Timber Industry—An Assessment of Timber Product Output and Use, 1993

Ronald L. Hackett and Dennis M. Adams

HIGHLIGHTS

PRIMARY WOOD-USING INDUSTRY

- The number of active primary wood-using mills in Nebraska dropped from 46 in 1980 to 35 in 1993. Thirty-two of the 35 mills in 1993 were sawmills; three-quarters of the mills were in the Eastern Forest Survey Unit (table 1 and fig. 1).
- In 1993, all the primary wood-using mills in Nebraska processed a total of 6.8 million cubic feet of roundwood into lumber and other various products (table 2).
- More than 85 percent of the roundwood processed was cut from Nebraska's forest lands; the remainder, mostly cottonwood, was imported from neighboring States.

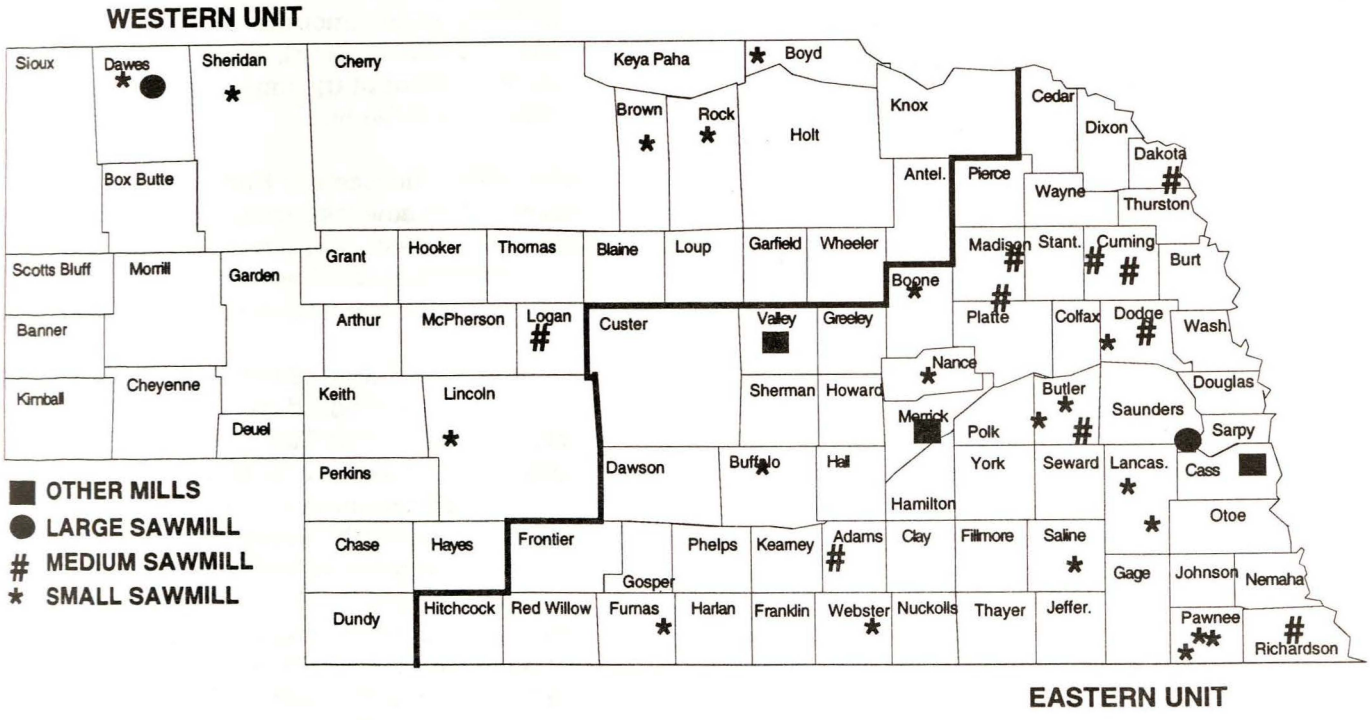


Figure 1.—*Active sawmills and other primary wood-using mills and Forest Survey Units in Nebraska, 1993. Sawmills are classed by volume of lumber produced in 1993: Large sawmills = more than 5 million board feet reported; medium sawmills = 1 to 5 million board feet reported; small sawmills less than 1 million board feet reported. Forest Survey Units are the geographic areas used by the Forest Inventory and Analysis Unit to report results of inventories and use of the Nation's forest resources.*

Ronald L. Hackett, Research Forester, received a B.S. degree in forest resources from the University of Minnesota. He joined the Forest Service in December 1974, and has been working with the North Central Station's Forest Inventory and Analysis Unit since.

Dennis M. Adams, Assistant State Forester, received a B.S. degree in forest management from Iowa State University and an M.S. degree in horticulture and forestry from the University of Nebraska. He has been employed by the University of Nebraska, State and Extension Forestry, since 1973.

INDUSTRIAL ROUNDWOOD PRODUCTION

- In 1993, more than 8.9 million cubic feet of industrial roundwood products were cut from Nebraska's forest lands, three times the level in 1980 (table 3 and fig. 2).

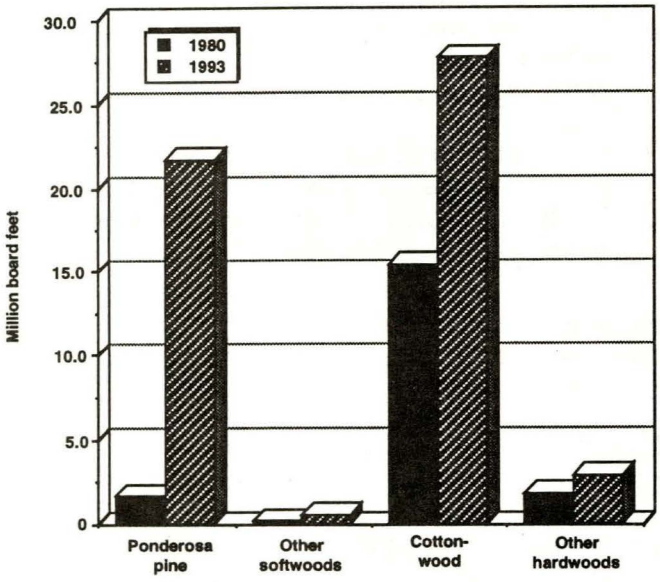


Figure 2.—*Saw-log production by major species group, Nebraska, 1980-1993.*

- Saw logs continued to be the main form of industrial roundwood harvested from Nebraska's forests. The only other roundwood products cut in 1993 were small volumes of veneer logs and other products. The major species for these other products were cottonwood and redcedar. Since 1980, the State's use of ponderosa pine for saw-log products has increased.

- In 1980, about four-fifths of the industrial roundwood production came from the Eastern Unit. By 1993, the industrial roundwood production totals from the Eastern and the Western Units were about equal.

- Saw-log production in 1993 was 52.7 million board feet, nearly 2.5 times the production in 1980. Ponderosa pine and cottonwood accounted for most of the increase, as well as 94 percent of the harvest in 1993. Other important species cut for saw logs were white oak, black walnut, and redcedar (table 4).

- More than two-thirds of the saw-log production in 1993 was processed in Nebraska. Of the State's saw-log production, 18.2 million board feet was exported, primarily to South Dakota and Wyoming. The Eastern Unit led in total production with 27 million board feet. Ponderosa pine was the major species cut for saw logs in the Western Unit, and cottonwood was the major species cut in the Eastern Unit.

- Counties producing more than 4 million board feet of saw logs each wereSheridan, Dawes, and Saunders. These counties furnished 43 percent of the Nebraska saw logs harvested in 1993 (table 5).

- Nebraska sawmills received 41.4 million board feet of logs in 1993. Iowa supplied 5.5 million board feet; small amounts were provided by South Dakota, Missouri, and Kansas. More than 90 percent of the imported volume was cottonwood (table 6).

- Sawmills in the Eastern Unit received 85 percent of all saw-log receipts in Nebraska. Western Unit sawmills processed mainly ponderosa pine, and Eastern Unit mills processed mainly cottonwood.

- Veneer-log production in Nebraska accounted for 623 thousand board feet, a 15-percent increase from 1980. Cottonwood and white oak accounted for an over 80 percent increase in veneer-log production in 1993. Cottonwood accounted for nearly 64 percent of the total veneer-log production (table 7).

- Counties each producing more than 100 thousand board feet of veneer logs were Cass and Sarpy in the Eastern Unit along the Missouri River. These two counties furnished 48 percent of the State's veneer log harvest.

TIMBER REMOVALS FOR INDUSTRIAL ROUNDWOOD

- Harvest of industrial roundwood in 1993 totaled 13.9 million cubic feet of timber cut. Only 35 percent or 5.0 million cubic feet was left in the woods as harvest residues (tables 8, 9 and fig. 3).

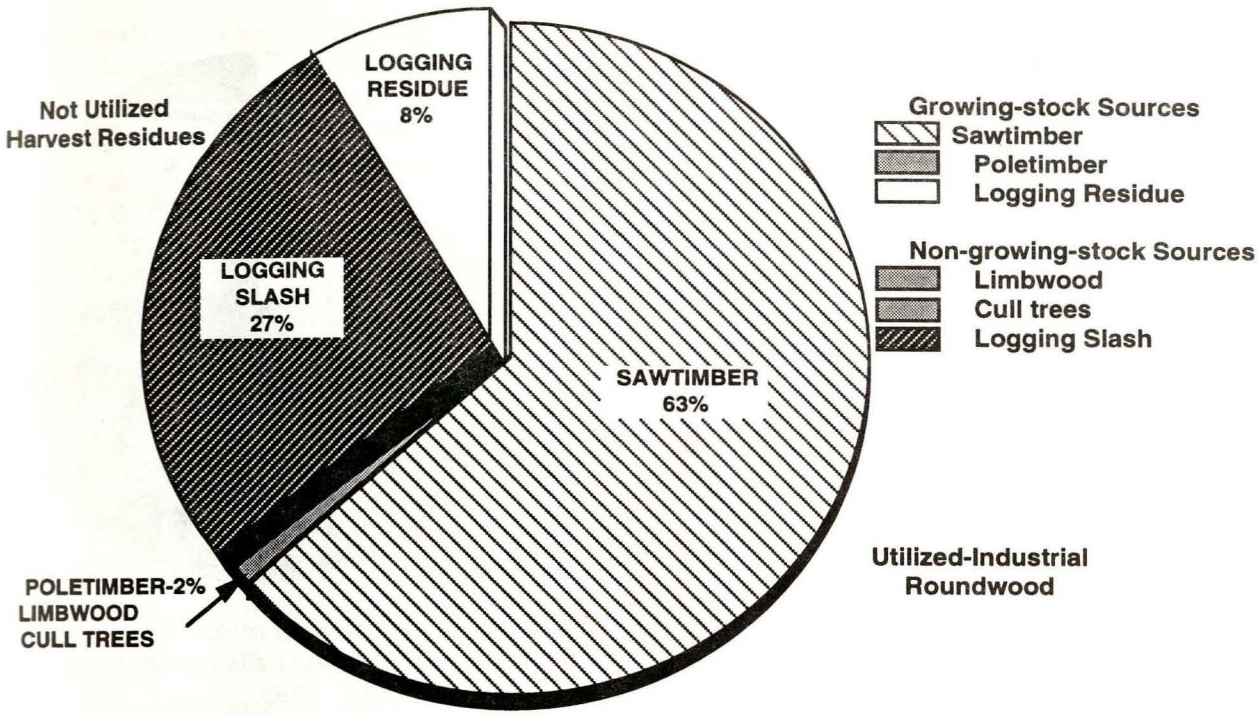


Figure 3.—*Distribution of timber removals for industrial roundwood by source of material, Nebraska, 1993.*

- Harvest residues included 1.2 million cubic feet of growing-stock portions of live trees on timberland (logging residues) and 3.8 million cubic feet in tops and cull material (logging slash).

- With Nebraska's primary forest industry dominated by sawmills, sawtimber removals supplied most of the volume for industrial roundwood products. Some product volume was also extracted from poletimber and non-growing stock sources such as limbwood, cull trees, dead trees, and nonforest trees from windrows, windbreaks, and pastures.

- Ninety-eight percent of the woody material removed in 1993 was harvested from growing-stock sources (sawtimber, poletimber, and harvest residues).

- Timber harvested for industrial roundwood and the resulting generation of logging residues extracted nearly 10 million cubic feet of growing-stock volume from Nebraska's timberland inventory in 1993 (table 10). In board foot equivalents, 55.6 million board feet of the total was cut from the sawtimber portion of the growing-stock inventory (table 11).

PRIMARY MILL RESIDUE

- During 1993, Nebraska's primary wood-using mills generated 57,900 tons of coarse (chippable) wood residue, 32,700 tons of fine wood residue, and 24,300 tons of bark (table 12).

- More than half of this volume was in the form of coarse wood residue, such as slabs and edgings, which is suitable for chipping (table 12 and fig. 4).

- Eighty-one percent or more of all residues (coarse, fine, bark) generated at Nebraska primary mills was used (table 12 and fig. 5).

- The bulk of the coarse and fine wood residues, such as slabs, edgings, shavings, and sawdust, was used for miscellaneous purposes such as small dimension specialty boards, animal bedding, litter, and mulch.

- Nineteen percent of the mill residues generated in the State still remained unused, but this was an improvement from 1980 when 33 percent of all residues generated went unused.

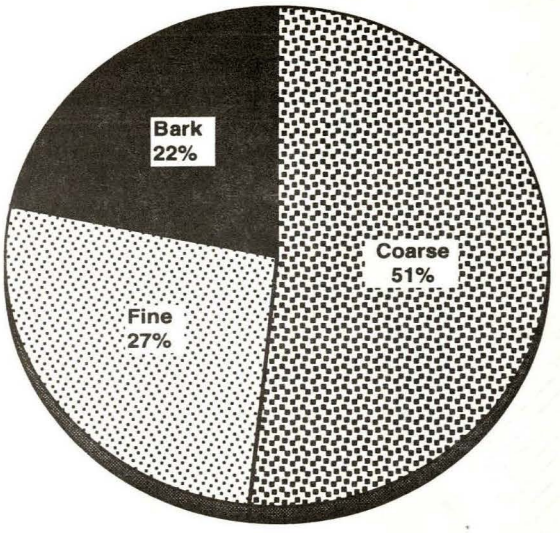


Figure 4.—*Distribution of residues generated by primary wood-using mills by type of residue, Nebraska, 1993.*

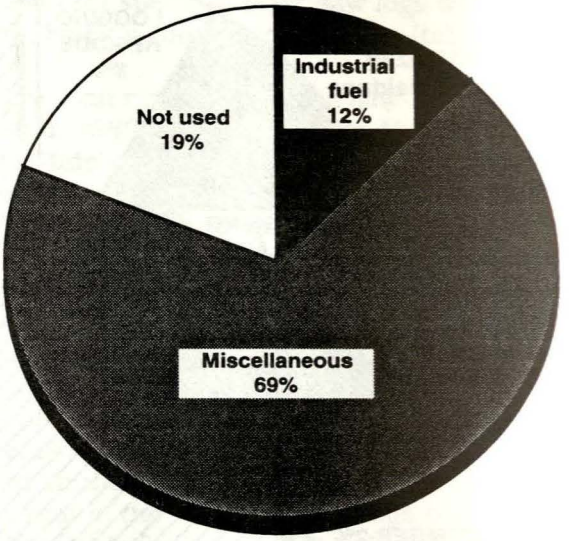


Figure 5.—*Distribution of residues generated by primary wood-using mills by method of disposal, Nebraska, 1993.*

APPENDIX

STUDY METHODS

This study was a cooperative effort of the Nebraska Forest Service (NFS) and the North Central Forest Experiment Station (NCFES). Using mail questionnaires supplied by NCFES and designed to determine the size and composition of the State's primary wood-using industry, its use of roundwood, and its generation and disposition of wood residues, the NFS canvassed all primary wood-using mills within the State. Followups to selected nonresponding mills, e.g., those thought to have significant activity, using additional mailings, telephone, and personal contacts were made by NFS. Completed questionnaires were sent to NCFES for editing and processing.

As part of data editing and processing, all industrial roundwood volumes reported on the questionnaires were converted to standard units of measure using regional conversion factors. Timber removals by source of material and harvest residues generated during logging were estimated from standard product volumes using factors developed from logging utilization studies previously conducted by NCFES. Finalized data on Nebraska's industrial roundwood receipts were loaded into a regional timber removals database where they were supplemented with data on out-of-State uses of Nebraska roundwood to provide a complete assessment of Nebraska's timber product output.

DEFINITION OF TERMS

Board foot.—Unit of measure applied to roundwood. It relates to lumber that is 1 foot long, 1 foot wide, and 1 inch thick (or its equivalent).

Central stem.—The portion of a tree between a 1-foot stump and the minimum 4.0-inch top diameter outside bark or point where the central stem breaks into limbs.

Coarse mill residue.—Wood residue suitable for chipping such as slabs, edgings, and veneer cores.

Commercial species.—Tree species presently or prospectively suitable for industrial wood products. (Note: Excludes species of typically small size, poor form, or inferior quality such as hophornbeam, Osage-orange, and redbud.)

Cull removals.—Net volume of rough and rotten trees plus the net volume in sections of the central stem of growing-stock trees that do not meet regional merchantability standards, harvested for industrial roundwood products.

Dead removals.—Net volume of dead trees harvested for industrial roundwood products.

Diameter at breast height (d.b.h.).—The outside bark diameter at 4.5 feet above the forest floor on the uphill side of the tree. For determining breast height, the forest floor includes the duff layer that may be present, but does not include unincorporated woody debris that may rise above the ground line.

Fine mill residue.—Wood residue not suitable for chipping such as sawdust and veneer clippings.

Forest land.—Land at least 16.7 percent stocked by forest trees of any size, or formerly having had such tree cover, and not currently developed for nonforest use. (Note: Stocking is measured by comparing specified standards with basal area and/or number of trees, age or size, and spacing.) The minimum area for classification of forest land is 1 acre. Roadside, streamside, and shelterbelt strips of timber must have a crown width of at least 120 feet to qualify as forest land. Unimproved roads and trails, streams, or other bodies of water or clearings in forest areas shall be classed as forest if less than 120 feet wide.

Growing-stock removals.—The growing-stock volume removed from the timberland inventory by harvesting industrial roundwood products. (Note: Includes sawtimber removals, poletimber removals, and logging residues.)

Growing-stock tree.—A live timberland tree of commercial species that meets specified standards of size, quality, and merchantability. (Note: Excludes rough, rotten, and dead trees.)

Growing-stock volume.—Net volume of growing-stock trees 5.0 inches d.b.h. and over, from 1 foot above the ground to a minimum 4.0-inch top diameter outside bark of the central stem or to the point where the central stem breaks into limbs.

Hardwoods.—Dicotyledonous trees, usually broad-leaved and deciduous.

Harvest residues.—The total net volume of unused portions of trees cut or killed by logging. (Note: Includes both logging residues and logging slash.)

Industrial fuelwood.—A roundwood product with or without bark, used to generate energy at non-manufacturing facilities such as schools, correctional institutions, or electric generating plants.

Industrial roundwood products.—Saw logs, pulpwood, veneer logs, poles, commercial posts, piling, cooperage logs, particleboard bolts, shaving bolts, lath bolts, charcoal bolts, and chips from roundwood used for pulp or board products.

Industrial roundwood production.—The quantity of industrial roundwood harvested in a geographic area.

Industrial roundwood receipts.—The quantity of industrial roundwood received by commercial mills in a geographic area.

International 1/4-inch rule.—A log rule or formula for estimating the board foot volume of logs, allowing one-half inch of taper for each 4-foot length. The rule appears in a number of forms that allow for kerf. In this form, a one-quarter inch of kerf is assumed. This rule is used as the USDA Forest Service standard log rule in the Eastern United States.

Limbwood removals.—Net volume of all portions of a tree other than the central stem, (including forks, large limbs, tops, and stumps) harvested for industrial roundwood products.

Logging residue.—The net volume of unused portions of the merchantable central stem of growing-stock trees cut or killed by logging.

Logging slash.—The net volume of unused portions of the unmerchantable (non-growing-stock) sections of trees cut or killed by logging.

Merchantable sections.—Sections of the central stem of growing-stock trees that meet either pulpwood or saw-log specifications.

Net volume.—Gross volume less deductions for rot, sweep, or other defects affecting use for roundwood products.

Noncommercial species.—Trees species of typically small size, poor form, or inferior quality that normally do not develop into trees suitable for industrial roundwood products. Classified in volume tables as rough trees.

Nonforest land.—Land that has never supported forests, and land formerly forested where use for timber management is precluded by development for other uses. (Note: Includes areas used for crops, improved pasture, residential areas, city parks, improved roads of any width and adjoining clearings, powerline clearings of any width, and 1 to 39.9-acre areas of water classified by the Bureau of the Census as land. If intermingled in forest areas, improved roads and nonforest strips must be more than 120 feet wide and more than 1 acre to qualify as nonforest land.)

Nonforest land removals.—Net volume of trees on nonforest lands harvested for industrial roundwood products.

Poletimber.—A growing-stock tree at least 5.0 inches d.b.h. but smaller than sawtimber size (9.0 inches d.b.h. for softwoods, 11.0 inches d.b.h. for hardwoods).

Poletimber removals.—Net volume in the merchantable central stem of poletimber trees harvested for industrial roundwood products.

Primary wood-using mills.—Mills receiving roundwood or chips from roundwood for processing into products such as lumber, veneer, and pulp.

Primary wood-using mill residue.—Wood materials (coarse and fine) and bark generated at manufacturing plants from roundwood processed into principal products. These residues include wood products (byproducts) obtained incidental to production of principal products and wood materials not utilized for some product.

Rotten tree.—A tree that does not meet regional merchantability standards because of excessive unsound cull.

Rough tree.—A tree that does not meet regional merchantability standards because of excessive sound cull. Includes noncommercial tree species.

Roundwood.—Logs, bolts, or other round sections cut from trees (including chips from roundwood).

Sapling.—A live tree between 1.0 and 5.0 inches d.b.h.

Sapling removals.—Net volume in saplings harvested for industrial roundwood products.

Saw-log portion.—That portion of the central stem of sawtimber trees between the stump and the saw-log top.

Saw-log top.—The point on the central stem of sawtimber trees above which a saw log can not be produced. The minimum saw-log top is 7.0 inches d.o.b. for softwoods and 9.0 inches d.o.b. for hardwoods.

Sawtimber removals.—As used in table 8, sawtimber removals refers to the net volume in the merchantable central stem of sawtimber trees harvested for industrial roundwood products. (Note: Includes the saw-log and upper-stem portions of sawtimber trees.) When referring to the sawtimber volume removed from the timberland inventory as in table 11, sawtimber removals refers to the net volume in the saw-log portion of sawtimber trees harvested for roundwood products or left on the ground as harvest residue, and is usually expressed in thousands of board feet (International 1/4-inch rule).

Sawtimber tree.—A growing-stock tree containing at least a 12-foot saw log or two noncontiguous saw logs 8 feet or longer, and meeting regional specifications for freedom from defect. Softwoods must be at least 9.0 inches d.b.h., and hardwoods must be at least 11.0 inches d.b.h.

Sawtimber volume.—Net volume in the saw-log portion of sawtimber trees.

Softwoods.—Coniferous trees, usually evergreen, having needles or scale-like leaves.

Timber product output.—The volume of roundwood products produced from an area's forests.

Timberland.—Forest land that is producing, or is capable of producing, in excess of 20 cubic feet per acre per year of industrial roundwood products under natural conditions, is not withdrawn from timber utilization by statute or administrative regulation, and is not associated with urban or rural development.

Tree.—A woody plant usually having one or more perennial stems, a more or less definitely formed crown of foliage, and a height of at least 12 feet at maturity.

Upper stem portion.—That portion of the central stem of sawtimber trees between the saw-log top and the minimum top diameter of 4.0 inches outside bark, or to the point where the central stem breaks into limbs.

Veneer log.—Log to be used in the production of plywood, finished panels, or veneer sheets, both rotary cut and sliced.

COMMON AND SCIENTIFIC NAMES OF TREE SPECIES MENTIONED IN THIS REPORT

SOFTWOODS

Ponderosa pine ..... *Pinus ponderosa*
Eastern redcedar ..... *Juniperus virginiana*

HARDWOODS

Ash
- White ash ..... *Fraxinus americana*
- Green ash ..... *Fraxinus pennsylvanica*

Quaking aspen ..... *Populus tremuloides*
Balsam poplar ..... *Populus balsamifera*
American basswood ..... *Tilia americana*
Boxelder ..... *Acer negundo*
Black cherry ..... *Prunus serotina*
Northern catalpa ..... *Catalpa speciosa*
Cottonwood
- Eastern cottonwood ..... *Populus deltoides*
- Plains cottonwood ..... *Populus sargentii*

Elm
- American elm ..... *Ulmus americana*
- Rock elm ..... *Ulmus thomasii*
- Siberian elm ..... *Ulmus pumila*
- Slippery elm ..... *Ulmus rubra*

Hackberry ..... *Celtis occidentalis*
Hickory
- Bitternut hickory ..... *Carya cordiformis*
- Mockernut hickory ..... *Carya tomentosa*
- Pignut hickory ..... *Carya glabra*
- Shagbark hickory ..... *Carya ovata*

Honeylocust ..... *Gleditsia triacanthos*
Silver maple ..... *Acer saccharinum*
Red mulberry ..... *Morus rubra*
White oaks
- Bur oak ..... *Quercus macrocarpa*
- Chinkapin oak ..... *Quercus muehlenbergii*
- Swamp white oak ..... *Quercus bicolor*

Red oaks
- Black oak ..... *Quercus velutina*
- Blackjack oak ..... *Quercus marilandica*
- Northern red oak ..... *Quercus rubra*

Osage-orange ..... *Maclura pomifera*
Sycamore ..... *Platanus occidentalis*
Black walnut ..... *Juglans nigra*
Black willow ..... *Salix nigra*

TABLE TITLES

Table 1.—Number of active primary wood-using mills in Nebraska, 1980 and 1993

Table 2.—Industrial roundwood receipts by species group and State of origin, Nebraska, 1993

Table 3.—Industrial roundwood production by Forest Survey Unit, species group, and type of product, Nebraska, 1993

Table 4.—Saw-log production by Forest Survey Unit, species group, and State of destination, Nebraska, 1993

Table 5.—Saw-log production from roundwood by Forest Survey Unit, county, and species group, Nebraska, 1993

Table 6.—Saw-log receipts by Forest Survey Unit, species group, and State of origin, Nebraska, 1993

Table 7.—Veneer-log production by Forest Survey Unit, county and species group, Nebraska, 1993

Table 8.—Timber removals for industrial roundwood by source of material and species group, Nebraska, 1993

Table 9.—Harvest residues generated by industrial roundwood harvesting from timberland, by Forest Survey Unit, county, and species group, Nebraska, 1993

Table 10.—Growing-stock removals from timberland for industrial roundwood by Forest Survey Unit, county, and species group, Nebraska, 1993

Table 11.—Sawtimber removals from timberland for industrial roundwood production by Forest Survey Unit, county, and species group, Nebraska, 1993

Table 12.—Residue produced at primary wood-using mills by type of material, type of use, and Forest Survey Unit, Nebraska, 1993

Table 1.—Number of active primary wood-using mills in Nebraska, 1980 and 1993

Kind of mill	1980	1993
Sawmills		
> 5000 mbf 1/	--	2
1000 to 5000 mbf 1/	7	10
50 to 1000 mbf 1/	35	13
< 50 mbf 1/	--	7
Total	42	32
Other mills 2/	4	3
All mills	46	35

1/ Thousand board feet, International 1/4-inch rule.

2/ Fence post, excelsior, cooperage, charcoal, veneer, etc.

Table 2.—Industrial roundwood receipts by species group and State of origin, Nebraska, 1993

(In thousand cubic feet)

Species group	Total	Iowa	Kansas	Missouri	Nebraska	South Dakota
SOFTWOODS						
Redcedar	225	--	--	--	225	--
Spruce	1/	--	--	--	1/	--
Ponderosa pine	843	--	--	--	843	--
Total	1,068	--	--	--	1,068	--
HARDWOODS						
Soft maple	10	3	--	3	5	--
Hackberry	20	2	--	2	16	--
Ash	51	7	--	5	39	--
Black walnut	42	4	--	11	27	--
Osage-orange	1	--	--	--	1	--
Cottonwood	5,325	746	11	29	4,406	134
Red oak group	56	5	5	16	29	--
White oak group	161	14	5	18	124	--
Willow	1	--	--	--	1	--
Basswood	3	2	--	--	2	--
Elm	55	9	--	--	46	--
Total	5,725	792	20	84	4,695	134
All species	6,794	792	20	84	5,763	134

1/ Less than 500 cubic feet.

Rows and colums may not sum due to rounding.

Table 3.—Industrial roundwood production by Forest Survey Unit, species group, and type of product, Nebraska, 1993 1/

ALL UNITS

Species group	Saw logs		Veneer logs		Other products	All products
	MBF 2/	*MCF 3/*	*MBF 2/*	*MCF 3/*	*MCF 3/*	*MCF 3/*
SOFTWOODS						
Redcedar	497	106	--	--	119	225
Spruce	1	*4/*	--	--	--	*4/*
Ponderosa pine	21,704	3,770	--	--	--	3,770
Total	22,202	3,876	--	--	119	3,995
HARDWOODS						
Soft maple	60	9	--	--	--	9
Hickory	--	--	1	*4/*	--	*4/*
Hackberry	99	16	--	--	--	16
Ash	235	40	--	--	--	40
Black walnut	563	86	73	10	--	96
Osage-orange	4	1	--	--	--	1
Cottonwood	27,686	4,272	398	91	75	4,438
Red oak group	184	33	43	10	--	43
White oak group	1,260	225	105	24	--	249
Willow	7	1	--	--	--	1
Basswood	124	20	1	*4/*	--	20
Elm	291	46	--	--	--	46
Other hardwoods	--	--	1	*4/*	--	*4/*
Total	30,515	4,749	623	136	75	4,960
All species	52,717	8,626	623	136	194	8,955

(Table 3 continued on next page)

(Table 3 contined)

EASTERN UNIT

Species group	Saw logs		Veneer logs		Other products	All products
	MBF 2/	*MCF 3/*	*MBF 2/*	*MCF 3/*	*MCF 3/*	*MCF 3/*
SOFTWOODS						
Redcedar	188	40	--	--	111	151
Ponderosa pine	8	1	--	--	--	1
Total	196	42	--	--	111	152
HARDWOODS						
Soft maple	60	9	--	--	--	9
Hickory	--	--	1	*4/*	--	*4/*
Hackberry	97	15	--	--	--	15
Ash	233	40	--	--	--	40
Black walnut	559	86	73	10	--	96
Osage-orange	4	1	--	--	--	1
Cottonwood	23,904	3,688	398	91	63	3,843
Red oak group	184	33	43	10	--	43
White oak group	1,255	224	105	24	--	248
Willow	7	1	--	--	--	1
Basswood	124	20	1	*4/*	--	20
Elm	264	42	--	--	--	42
Other hardwoods	--	--	1	*4/*	--	*4/*
Total	26,689	4,159	623	136	63	4,358
All species	26,885	4,200	623	136	174	4,510

WESTERN UNIT

Species group	Saw logs		Veneer logs		Other products	All products
	MBF 2/	*MCF 3/*	*MBF 2/*	*MCF 3/*	*MCF 3/*	*MCF 3/*
SOFTWOODS						
Redcedar	309	66	--	--	8	74
Spruce	1	*4/*	--	--	--	*4/*
Ponderosa Pine	21,695	3,769	--	--	--	3,769
Total	22,006	3,835	--	--	8	3,843
HARDWOODS						
Soft Maple	*5/*	*4/*	--	--	--	*4/*
Hackberry	3	*4/*	--	--	--	*4/*
Ash	3	*4/*	--	--	--	*4/*
Black Walnut	4	1	--	--	--	1
Cottonwood	3,783	584	--	--	12	596
White Oak Group	6	1	--	--	--	1
Basswood	*5/*	*4/*	*5/*	*4/*	--	*4/*
Elm	28	4	--	--	--	4
Total	3,826	591	*5/*	*4/*	12	602
All species	25,832	4,425	*5/*	*4/*	20	4,445

1/ Based on utilization studies in the region.

2/ Thousand board feet, International 1/4-inch rule.

3/ Thousand cubic feet.

4/ Less than 500 cubic feet.

5/ Less than 500 board feet.

Rows and columns may not sum due to rounding.

Table 4.—Saw-log production by Forest Survey Unit, species group, and State of destination, Nebraska, 1993

(In thousand board feet) 1/

Species	Total	Iowa	Kansas	Missouri	Nebraska	South Dakota	Wyoming
ALL UNITS							
SOFTWOODS							
Redcedar	497	--	--	--	497	--	--
Spruce	1	--	--	--	1	--	--
Ponderosa pine	21,704	--	--	--	4,856	10,800	6,048
Total	22,202	--	--	--	5,354	10,800	6,048
HARDWOODS							
Soft maple	60	--	--	30	30	--	--
Hackberry	99	--	--	--	99	--	--
Ash	235	5	--	--	230	--	--
Black walnut	563	185	101	103	174	--	--
Osage-orange	4	--	--	--	4	--	--
Cottonwood	27,686	--	--	133	27,503	50	--
Red oak group	184	10	--	10	164	--	--
White oak group	1,260	--	--	565	696	--	--
Willow	7	--	--	--	7	--	--
Basswood	124	--	--	115	10	--	--
Elm	291	--	--	--	291	--	--
Total	30,515	200	101	956	29,208	50	--
All species	52,717	200	101	956	34,562	10,850	6,048
EASTERN UNIT							
SOFTWOODS							
Redcedar	188	--	--	--	188	--	--
Ponderosa pine	8	--	--	--	8	--	--
Total	196	--	--	--	196	--	--
HARDWOODS							
Soft maple	60	--	--	30	30	--	--
Hackberry	97	--	--	--	97	--	--
Ash	233	5	--	--	228	--	--
Black walnut	559	185	101	103	170	--	--
Osage-orange	4	--	--	--	4	--	--
Cottonwood	23,904	--	--	133	23,770	--	--
Red oak group	184	10	--	10	164	--	--
White oak group	1,255	--	--	565	690	--	--
Willow	7	--	--	--	7	--	--
Basswood	124	--	--	115	10	--	--
Elm	264	--	--	--	264	--	--
Total	26,689	200	101	956	25,433	--	--
All species	26,885	200	101	956	25,629	--	--

(Table 4 ciontinued on next page)

(Table 4 continued)

Species	WESTERN UNIT						
	Total	Iowa	Kansas	Missouri	Nebraska	South Dakota	Wyoming
SOFTWOODS							
Redcedar	309	--	--	--	309	--	--
Spruce	1	--	--	--	1	--	--
Ponderosa pine	21,695	--	--	--	4,847	10,800	6,048
Total	22,006	--	--	--	5,158	10,800	6,048
HARDWOODS							
Soft maple	*2/*	--	--	--	*2/*	--	--
Hackberry	3	--	--	--	3	--	--
Ash	3	--	--	--	3	--	--
Black walnut	4	--	--	--	4	--	--
Cottonwood	3,783	--	--	--	3,733	50	--
White oak group	6	--	--	--	6	--	--
Basswood	*2/*	--	--	--	*2/*	--	--
Elm	28	--	--	--	28	--	--
Total	3,826	--	--	--	3,776	50	--
All species	25,832	--	--	--	8,934	10,850	6,048

1/ International 1/4-inch rule.

2/ Less than 500 board feet.

Rows and columns may not sum due to rounding.

Table 5.—Saw-log production from roundwood by Forest Survey Unit, county, and species group, Nebraska, 1993

(In thousand board feet) 1/

Unit and county	Red-cedar	Spruce	Ponde-rosa pine	Total soft-woods	Soft maple	Hickory	Hack-berry	Ash	Black walnut	Osage-orange
EASTERN UNIT										
Boone	16	--	--	16	1	--	11	2/	125	--
Buffalo	--	--	--	--	--	--	--	--	1	--
Burt	--	--	--	--	--	--	--	--	2	--
Butler	3	--	7	10	1	--	1	3	3	--
Cass	3	--	2/	4	4	--	2	18	10	1
Cedar	--	--	--	--	--	--	--	--	--	--
Colfax	55	--	--	55	--	--	--	--	--	--
Cuming	3	--	--	3	28	--	3	4	16	--
Dakota	--	--	--	--	--	--	--	--	--	--
Dixon	--	--	--	--	--	--	--	--	--	--
Dodge	3	--	--	3	--	--	3	--	3	--
Franklin	7	--	--	7	--	--	--	7	3	--
Furnas	7	--	--	7	--	--	--	7	3	--
Gage	3	--	2/	4	4	--	2	3	95	1
Hall	--	--	--	--	--	--	--	--	--	--
Harlan	7	--	--	7	--	--	--	7	3	--
Howard	1	--	--	1	--	--	2/	2/	1	--
Jefferson	--	--	--	--	--	--	--	--	--	--
Johnson	--	--	--	--	--	--	4	7	29	--
Lancaster	3	--	2/	4	4	--	2	3	17	1
Madison	--	--	--	--	--	--	--	--	--	--
Merrick	1	--	--	1	--	--	2/	2/	1	--
Nance	1	--	--	1	--	--	2/	43	1	--
Nemaha	--	--	--	--	--	--	17	21	20	--
Nuckolls	--	--	--	--	--	--	--	--	--	--
Otoe	3	--	2/	4	6	--	16	3	77	1
Pawnee	--	--	--	--	--	--	--	14	21	--
Platte	58	--	--	58	1	--	1	1	1	--
Polk	3	--	--	3	1	--	1	1	1	--
Richardson	--	--	--	--	--	--	14	14	92	1
Saline	--	--	--	--	--	--	--	--	--	--
Saunders	3	--	--	3	1	--	1	73	3	--
Thurston	8	--	--	8	8	--	21	--	32	--
Webster	--	--	--	--	--	--	--	--	--	--
Total	188	--	8	196	60	--	97	233	559	4

(Table 5 continued on next page)

(Table 5 continued)

Unit and county	Red-cedar	Spruce	Ponde-rosa pine	Total soft-woods	Soft maple	Hickory	Hack-berry	Ash	Black walnut	Osage-orange
WESTERN UNIT										
Antelope	--	--	--	--	--	--	--	--	--	--
Boyd	3	--	--	3	--	--	--	1	1	--
Brown	14	--	62	76	--	--	1	--	1	--
Dawes	--	--	5,462	5,462	--	--	--	--	--	--
Holt	--	--	--	--	--	--	--	--	--	--
Keya Paha	--	--	216	216	--	--	--	--	--	--
Knox	--	--	--	--	--	--	--	--	--	--
Lincoln	279	1	19	299	*2/*	--	1	1	1	--
Rock	14	--	93	106	--	--	--	--	--	--
Sheridan	--	--	13,843	13,843	--	--	--	--	--	--
Sioux	--	--	2,001	2,001	--	--	--	--	--	--
Total	309	1	21,695	22,006	*2/*	--	3	3	4	--
State total	497	1	21,704	22,202	60	--	99	235	563	4

(Table 5 continued on next page)

(Table 5 continued)

Unit and county	Cotton-wood	Red oak group	White oak group	Willow	Bass-wood	Elm	Other hard-woods	Total hard-woods	All species
EASTERN UNIT									
Boone	1,877	--	221	--	--	1	--	2,236	2,252
Buffalo	11	--	18	--	--	--	--	30	30
Burt	524	--	--	--	--	--	--	526	526
Butler	147	3	3	--	9	1	--	171	180
Cass	554	--	31	--	--	28	--	647	651
Cedar	552	--	--	--	--	--	--	552	552
Colfax	1,390	--	--	--	--	--	--	1,390	1,445
Cuming	3,191	--	3	7	--	17	--	3,268	3,271
Dakota	552	--	--	--	--	--	--	552	552
Dixon	552	--	--	--	--	--	--	552	552
Dodge	366	--	3	--	--	3	--	377	380
Franklin	2,836	--	--	--	--	--	--	2,846	2,853
Furnas	110	--	--	--	--	3	--	123	130
Gage	176	--	61	--	--	1	--	342	346
Hall	792	--	--	--	--	--	--	792	792
Harlan	110	--	--	--	--	3	--	123	130
Howard	--	--	1	--	--	1	--	3	3
Jefferson	166	--	21	--	--	--	--	186	186
Johnson	138	5	41	--	35	3	--	262	262
Lancaster	9	--	3	--	--	1	--	39	43
Madison	820	--	--	--	--	--	--	820	820
Merrick	345	--	1	--	--	1	--	348	348
Nance	1,390	--	42	--	--	56	--	1,532	1,533
Nemaha	193	50	61	--	53	4	--	419	419
Nuckolls	80	--	--	--	--	--	--	80	80
Otoe	102	43	60	--	--	1	--	309	313
Pawnee	380	31	97	--	--	--	--	543	543
Platte	1,391	3	3	--	9	1	--	1,412	1,470
Polk	277	2	3	--	9	1	--	296	299
Richardson	248	46	229	--	--	--	--	645	645
Saline	166	--	21	--	--	--	--	186	186
Saunders	3,754	2	141	--	9	139	--	4,124	4,126
Thurston	584	--	194	--	--	--	--	839	847
Webster	120	--	--	--	--	--	--	120	120
Total	23,904	184	1,255	7	124	264	--	26,689	26,885

(Table 5 continued on next page)

(Table 5 continued)

Unit and county	Cotton-wood	Red oak group	White oak group	Willow	Bass-wood	Elm	Other hard-woods	Total hard-woods	All species
WESTERN UNIT									
Antelope	370	--	--	--	--	--	--	370	370
Boyd	--	--	--	--	--	--	--	3	6
Brown	7	--	6	--	--	--	--	15	91
Dawes	--	--	--	--	--	--	--	--	5,462
Holt	2,070	--	--	--	--	--	--	2,070	2,070
Keya Paha	28	--	--	--	--	--	--	28	244
Knox	25	--	--	--	--	--	--	25	25
Lincoln	787	--	--	--	*2/*	28	--	818	1,117
Rock	497	--	--	--	--	--	--	497	603
Sheridan	--	--	--	--	--	--	--	--	13,843
Sioux	--	--	--	--	--	--	--	--	2,001
Total	3,783	--	6	--	*2/*	28	--	3,826	25,832
State total	27,686	184	1,260	7	124	291	--	30,515	52,717

1/ International 1/4-inch rule.

2/ Less than 500 board feet.

Rows and columns may not sum due to rounding.

Table 6.—Saw-log receipts by Forest Survey Unit, species group, and State of origin, Nebraska, 1993

(In thousand board feet) 1/

Species	Total	Iowa	Kansas	Missouri	Nebraska	South Dakota
SOFTWOODS						
Redcedar	497	--	--	--	497	--
Spruce	1	--	--	--	1	--
Ponderosa pine	4,856	--	--	--	4,856	--
Total	5,354	--	--	--	5,354	--
HARDWOODS						
Soft maple	63	17	--	17	30	--
Hackberry	127	14	--	14	99	--
Ash	299	41	--	28	230	--
Black walnut	243	19	--	50	174	--
Osage-orange	4	--	--	--	4	--
Cottonwood	33,746	5,208	69	207	27,503	759
Red oak group	313	30	28	91	164	--
White oak group	901	79	28	99	696	--
Willow	7	--	--	--	7	--
Basswood	21	11	--	--	10	--
Elm	346	55	--	--	291	--
Total	36,071	5,474	124	505	29,208	759
All species	41,425	5,474	124	505	34,562	759

(Table 6 continued on next page)

(Table 6 continued)

EASTERN UNIT

Species	Total	Iowa	Kansas	Missouri	Nebraska	South Dakota
SOFTWOODS						
Redcedar	188	--	--	--	188	--
Ponderosa pine	8	--	--	--	8	--
Total	196	--	--	--	196	--
HARDWOODS						
Soft Maple	63	17	--	17	30	--
Hackberry	124	14	--	14	97	--
Ash	297	41	--	28	228	--
Black Walnut	239	19	--	50	170	--
Osage-Orange	4	--	--	--	4	--
Cottonwood	32,429	5,208	69	207	26,185	759
Red Oak Group	313	30	28	91	164	--
White Oak Group	896	79	28	99	690	--
Willow	7	--	--	--	7	--
Basswood	21	11	--	--	10	--
Elm	319	55	--	--	264	--
Total	34,710	5,474	124	505	27,848	759
All species	34,906	5,474	124	505	28,044	759

WESTERN UNIT

Species	Total	Iowa	Kansas	Missouri	Nebraska	South Dakota
SOFTWOODS						
Redcedar	309	--	--	--	309	--
Spruce	1	--	--	--	1	--
Ponderosa pine	4,847	--	--	--	4,847	--
Total	5,158	--	--	--	5,158	--
HARDWOODS						
Soft maple	*2/*	--	--	--	*2/*	--
Hackberry	3	--	--	--	3	--
Ash	3	--	--	--	3	--
Black walnut	4	--	--	--	4	--
Cottonwood	1,318	--	--	--	1,318	--
White oak group	6	--	--	--	6	--
Basswood	*2/*	--	--	--	*2/*	--
Elm	28	--	--	--	28	--
Total	1,361	--	--	--	1,361	--
All species	6,519	--	--	--	6,519	--

1/ International 1/4-inch rule.

2/ Less than 500 board feet.

Rows and columns may not sum due to rounding.

Table 7.—Veneer log production by Forest Survey Unit, county, and species group, Nebraska, 1993

(In thousand board feet) 1/

Unit and county	Hickory	Black walnut	Cotton-wood	Red oak group	White oak group	Bass-wood	Other hard-woods	All species
EASTERN UNIT								
Boone	--	21	--	--	35	--	--	55
Buffalo	--	--	--	--	3	--	--	3
Butler	2/	--	--	1	--	2/	2/	1
Cass	--	2	150	--	--	--	--	151
Cuming	--	3	--	--	--	--	--	3
Douglas	--	--	36	--	--	--	--	36
Gage	--	15	--	--	7	--	--	22
Johnson	2/	3	--	1	--	2/	2/	5
Lancaster	--	2	--	--	--	--	--	2
Nemaha	2/	3	--	12	--	2/	2/	16
Otoe	2/	12	28	10	3	--	2/	53
Pawnee	2/	--	--	7	--	--	2/	8
Platte	2/	--	--	1	--	2/	2/	1
Polk	2/	--	--	2/	--	2/	2/	2/
Richardson	2/	7	--	11	28	--	2/	46
Sarpy	--	--	150	--	--	--	--	150
Saunders	2/	--	--	2/	--	2/	2/	2/
Thurston	--	5	--	--	30	--	--	36
Washington	--	--	36	--	--	--	--	36
Total	1	73	398	43	105	1	1	623
WESTERN UNIT								
Lincoln	--	--	--	--	--	2/	--	2/
Total	--	--	--	--	--	2/	--	2/
State total	1	73	398	43	105	1	1	623

1/ International 1/4-inch rule.

2/ Less than 500 board feet.

Rows and columns may not sum due to rounding.

Table 8.—Timber removals for industrial roundwood by source of material and species group, Nebraska, 1993 1/

(In thousand cubic feet)

ALL UNITS

Species group	Growing stock				Non-growing stock							Total material used for products	Total material not used	Total material harvested
	Used for products		Logging residue		Used for products					Logging slash				
	Saw-timber	Pole-timber	(not used)	Total	Limb-wood	Sap-lings	Cull trees	Dead trees	Nonforest trees	(not used)	Total			
SOFTWOODS														
Redcedar	213.0	10.8	11.4	235.2	--	--	0.7	--	--	41.3	42.0	224.6	52.7	277.2
Spruce	0.2	--	2/	0.3	--	--	2/	--	--	0.1	0.1	0.2	0.1	0.4
Ponderosa pine	3,765.6	--	403.7	4,169.3	--	--	4.3	--	--	1,625.6	1,630.0	3,769.9	2,029.3	5,799.2
Total	3,978.9	10.8	415.1	4,404.7	--	--	5.1	--	--	1,667.0	1,672.1	3,994.7	2,082.1	6,076.8
HARDWOODS														
Soft maple	8.2	--	0.9	9.1	--	--	1.0	0.3	--	3.5	4.8	9.5	4.5	13.9
Hickory	0.2	--	2/	0.2	--	--	--	--	--	0.1	0.1	0.2	0.1	0.2
Hackberry	13.6	--	1.5	15.1	--	--	1.7	0.4	--	5.9	8.0	15.8	7.4	23.2
Ash	36.4	--	15.0	51.4	1.0	--	2.8	--	--	19.0	22.9	40.2	34.0	74.3
Black walnut	80.9	--	7.6	88.5	1.6	--	2.3	--	11.7	32.9	48.5	96.5	40.5	137.0
Osage-orange	--	--	--	--	2/	--	0.7	--	--	0.6	1.3	0.7	0.6	1.3
Cottonwood	4,431.3	6.8	659.1	5,097.3	--	--	--	--	--	1,954.2	1,954.2	4,438.2	2,613.3	7,051.5
Red oak group	30.8	1.1	7.5	39.4	2/	--	10.9	--	--	15.4	26.2	42.8	22.9	65.7
White oak group	166.9	7.8	48.2	222.8	0.1	--	74.2	--	--	86.8	161.1	249.0	134.9	384.0
Willow	0.9	--	0.1	1.1	--	--	0.1	2/	--	0.4	0.6	1.1	0.5	1.6
Basswood	17.2	--	1.9	19.1	--	--	2.1	0.6	--	7.4	10.1	19.9	9.3	29.2
Elm	39.9	--	4.4	44.3	--	--	5.0	1.3	--	17.3	23.6	46.2	21.7	67.9
Other hardwoods	0.3	--	0.0	0.3	--	--	--	--	--	0.1	0.1	0.3	0.2	0.5
Total	4,826.6	15.8	746.3	5,588.7	2.8	--	100.9	2.6	11.7	2,143.6	2,261.6	4,960.4	2,889.9	7,850.3
All species	8,805.5	26.5	1,161.4	9,993.5	2.8	--	106.0	2.6	11.7	3,810.6	3,933.7	8,955.1	4,972.0	13,927.1

(Table 8 continued on next page)

(Table 8 continued)

EASTERN UNIT

Species group	Growing stock				Non-growing stock							Total material used for products	Total material not used	Total material harvested
	Used for products		Logging residue		Used for products					Logging slash				
	Saw-timber	Pole-timber	(not used)	Total	Limb-wood	Sap-lings	Cull trees	Dead trees	Nonforest trees	(not used)	Total			
SOFTWOODS														
Redcedar	140.3	10.1	10.3	160.7	--	--	0.3	--	--	15.6	15.9	150.7	25.9	176.5
Ponderosa pine	1.4	--	0.2	1.6	--	--	2/	--	--	0.6	0.6	1.4	0.8	2.2
Total	141.8	10.1	10.4	162.3	--	--	0.3	--	--	16.2	16.5	152.1	26.6	178.8
HARDWOODS														
Soft maple	8.2	--	0.9	9.1	--	--	1.0	0.3	--	3.5	4.8	9.5	4.4	13.9
Hickory	0.2	--	2/	0.2	--	--	--	--	--	0.1	0.1	0.2	0.1	0.2
Hackberry	13.2	--	1.5	14.7	--	--	1.7	0.4	--	5.7	7.8	15.3	7.2	22.5
Ash	36.0	--	14.9	50.8	1.0	--	2.8	--	--	18.8	22.6	39.8	33.6	73.4
Black walnut	80.4	--	7.5	87.9	1.6	--	2.3	--	11.6	32.7	48.2	95.8	40.2	136.1
Osage-orange	--	--	--	--	2/	--	0.7	--	--	0.6	1.3	0.7	0.6	1.3
Cottonwood	3,836.9	5.7	569.9	4,412.5	--	--	--	--	--	1,692.4	1,692.4	3,842.6	2,262.4	6,105.0
Red oak group	30.8	1.1	7.5	39.4	2/	--	10.9	--	--	15.4	26.2	42.8	22.9	65.7
White oak group	166.2	7.8	48.0	222.0	0.1	--	73.9	--	--	86.4	160.5	248.1	134.4	382.4
Willow	0.9	--	0.1	1.1	--	--	0.1	2/	--	0.4	0.6	1.1	0.5	1.6
Basswood	17.2	--	1.9	19.1	--	--	2.1	0.6	--	7.4	10.1	19.9	9.3	29.2
Elm	36.1	--	4.0	40.1	--	--	4.5	1.2	--	15.6	21.3	41.9	19.6	61.5
Other hardwoods	0.3	--	2/	0.3	--	--	--	--	--	0.1	0.1	0.3	0.2	0.5
Total	4,226.4	14.7	656.2	4,897.3	2.8	--	100.0	2.5	11.6	1,879.2	1,996.1	4,357.9	2,535.5	6,893.3
All species	4,368.1	24.7	666.7	5,059.5	2.8	--	100.3	2.5	11.6	1,895.5	2,012.6	4,510.0	2,562.1	7,072.1

WESTERN UNIT

SOFTWOODS														
Redcedar	72.7	0.7	1.1	74.5	--	--	0.5	--	--	25.7	26.2	73.9	26.8	100.7
Spruce	0.2	--	2/	0.3	--	--	2/	--	--	0.1	0.1	0.2	0.1	0.4
Ponderosa pine	3,764.2	--	403.5	4,167.7	--	--	4.3	--	--	1,625.0	1,629.3	3,768.5	2,028.5	5,797.0
Total	3,837.1	0.7	404.7	4,242.5	--	--	4.8	--	--	1,650.8	1,655.6	3,842.6	2,055.4	5,898.1
HARDWOODS														
Soft maple	2/	--	2/	2/	--	--	2/	2/	--	2/	2/	2/	2/	2/
Hackberry	0.4	--	2/	0.4	--	--	2/	2/	--	0.2	0.2	0.4	0.2	0.6
Ash	0.4	--	0.2	0.6	2/	--	2/	--	--	0.2	0.3	0.5	0.4	0.9
Black walnut	0.5	--	0.1	0.6	2/	--	2/	--	0.1	0.2	0.3	0.6	0.3	0.9
Cottonwood	594.5	1.1	89.2	684.8	--	--	--	--	--	261.8	261.8	595.6	351.0	946.5
White oak group	0.6	2/	0.2	0.9	2/	--	0.3	--	--	0.3	0.7	1.0	0.5	1.5
Basswood	2/	--	2/	2/	--	--	2/	2/	--	2/	2/	2/	2/	2/
Elm	3.8	--	0.4	4.2	--	--	0.5	0.1	--	1.6	2.2	4.4	2.1	6.4
Total	600.2	1.1	90.1	691.5	2/	--	0.9	0.1	0.1	264.4	265.5	602.5	354.5	957.0
All species	4,437.4	1.8	494.8	4,933.9	2/	--	5.7	0.1	0.1	1,915.1	1,921.1	4,445.1	2,409.9	6,855.0

1/ Based on utilization studies in the region.

2/ Less than 100 cubic feet.

Rows and columns may not sum due to rounding.

Table 9.—Harvest residues generated by industrial roundwood harvesting from timberland, by Forest Survey Unit, county, and species group, Nebraska, 1993

(In thousand cubic feet)

Unit and county	Red-cedar	Spruce	Ponde-rosa pine	Total soft-woods	Soft maple	Hickory	Hack-berry	Ash	Black walnut	Osage-orange
EASTERN UNIT										
Boone	1	--	--	1	1/	--	1	1/	9	--
Buffalo	--	--	--	--	--	--	--	--	1/	--
Burt	--	--	--	--	--	--	--	--	1/	--
Butler	1/	--	1	1	1/	1/	1/	1/	1/	--
Cass	1/	--	1/	1/	1/	--	1/	3	1	1/
Cedar	--	--	--	--	--	--	--	--	--	--
Colfax	5	--	--	5	--	--	--	--	--	--
Cuming	1/	--	--	1/	2	--	1/	1	1	--
Dakota	--	--	--	--	--	--	--	--	--	--
Dixon	--	--	--	--	--	--	--	--	--	--
Dodge	1/	--	--	1/	--	--	1/	--	1/	--
Douglas	--	--	--	--	--	--	--	--	--	--
Franklin	1	--	--	1	--	--	--	1	1/	--
Furnas	1	--	--	1	--	--	--	1	1/	--
Gage	1/	--	1/	1/	1/	--	1/	1/	7	1/
Hall	--	--	--	--	--	--	--	--	--	--
Harlan	1	--	--	1	--	--	--	1	1/	--
Howard	1/	--	--	1/	--	--	1/	1/	1/	--
Jefferson	--	--	--	--	--	--	--	--	--	--
Johnson	--	--	--	--	--	1/	1/	1	2	--
Lancaster	1/	--	1/	1/	1/	--	1/	1/	1	1/
Madison	--	--	--	--	--	--	--	--	--	--
Merrick	5	--	--	5	--	--	1/	1/	1/	--
Nance	1/	--	--	1/	--	--	1/	6	1/	--
Nemaha	--	--	--	--	--	1/	1	3	1	--
Nuckolls	--	--	--	--	--	--	--	--	--	--
Otoe	1/	--	1/	1/	1/	1/	1	1/	6	1/
Pawnee	--	--	--	--	--	1/	--	2	1	--
Platte	5	--	--	5	1/	1/	1/	1/	1/	--
Polk	5	--	--	5	1/	1/	1/	1/	1/	--
Richardson	--	--	--	--	--	1/	1	2	6	1/
Saline	--	--	--	--	--	--	--	--	--	--
Sarpy	--	--	--	--	--	--	--	--	--	--
Saunders	1/	--	--	1/	1/	1/	1/	11	1/	--
Thurston	1	--	--	1	1	--	2	--	2	--
Valley	--	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--
Webster	--	--	--	--	--	--	--	--	--	--
Total	26	--	1	27	4	1/	7	34	40	1

(Table 9 continued on next page)

(Table 9 continued)

Unit and county	Red-cedar	Spruce	Ponde-rosa pine	Total soft-woods	Soft maple	Hickory	Hack-berry	Ash	Black walnut	Osage-orange
WESTERN UNIT										
Boyd	1/	--	--	1/	--	--	--	1/	1/	--
Brown	1	--	6	7	--	--	1/	--	1/	--
Dawes	--	--	511	511	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--
Holt	--	--	--	--	--	--	--	--	--	--
Keya Paha	--	--	20	20	--	--	--	--	--	--
Knox	--	--	--	--	--	--	--	--	--	--
Lincoln	23	1/	2	25	1/	--	1/	1/	1/	--
Loup	1/	--	--	1/	--	--	--	--	--	--
Rock	1	--	9	10	--	--	--	--	--	--
Sheridan	--	--	1,294	1,294	--	--	--	--	--	--
Sioux	--	--	187	187	--	--	--	--	--	--
Wheeler	1/	--	--	1/	--	--	--	--	--	--
Total	27	1/	2,029	2,055	1/	1/	1/	1/	1/	1/
State total	53	1/	2,029	2,082	4	1/	7	34	40	1

(Table 9 continued on next page)

(Table 9 continued)

Unit and county	Cotton-wood	Red oak group	White oak group	Willow	Bass-wood	Elm	Othe hard-woods	Total hard-woods	All species
EASTERN UNIT									
Boone	174	--	26	--	--	1/	--	209	211
Buffalo	1	--	2	--	--	--	--	3	3
Burt	49	--	--	--	--	--	--	49	49
Butler	14	1/	1/	--	1	1/	1/	16	17
Cass	68	--	3	--	--	2	--	77	78
Cedar	51	--	--	--	--	--	--	51	51
Colfax	129	--	--	--	--	--	--	129	133
Cuming	295	--	1/	1	--	1	--	301	301
Dakota	51	--	--	--	--	--	--	51	51
Dixon	51	--	--	--	--	--	--	51	51
Dodge	34	--	1/	--	--	1/	--	35	35
Douglas	4	--	--	--	--	--	--	4	4
Franklin	262	--	--	--	--	--	--	264	264
Furnas	10	--	--	--	--	1/	--	12	12
Gage	16	--	7	--	--	1/	--	31	31
Hall	73	--	--	--	--	--	--	73	73
Harlan	10	--	--	--	--	1/	--	12	12
Howard	--	--	1/	--	--	1/	--	1/	1/
Jefferson	15	--	2	--	--	--	--	17	17
Johnson	13	1	4	--	3	1/	1/	24	24
Lancaster	1	--	1/	--	--	1/	--	3	4
Madison	76	--	--	--	--	--	--	76	76
Merrick	34	--	1/	--	--	1/	--	34	39
Nance	129	--	4	--	--	4	--	143	143
Nemaha	18	6	6	--	4	1/	1/	40	40
Nuckolls	7	--	--	--	--	--	--	7	7
Otoe	13	5	6	--	--	1/	1/	32	32
Pawnee	35	4	9	--	--	--	1/	52	52
Platte	129	1/	1/	--	1	1/	1/	131	135
Polk	28	1/	1/	--	1	1/	1/	29	35
Richardson	23	6	25	--	--	--	1/	64	64
Saline	15	--	2	--	--	--	--	17	17
Sarpy	17	--	--	--	--	--	--	17	17
Saunders	347	1/	14	--	1	10	1/	383	383
Thurston	54	--	22	--	--	--	--	81	82
Valley	1	--	--	--	--	--	--	1	1
Washington	4	--	--	--	--	--	--	4	4
Webster	11	--	--	--	--	--	--	11	11
Total	2,262	23	134	1	9	20	1/	2,535	2,562

(Table 9 continued on next page)

(Table 9 continued)

Unit and county	Cotton-wood	Red oak group	White oak group	Willow	Bass-wood	Elm	Othe hard-woods	Total hard-woods	All species
WESTERN UNIT									
Boyd	--	--	--	--	--	--	--	*1/*	1
Brown	1	--	1	--	--	--	--	1	8
Dawes	--	--	--	--	--	--	--	--	511
Garfield	*1/*	--	--	--	--	--	--	*1/*	*1/*
Holt	191	--	--	--	--	--	--	191	191
Keya Paha	3	--	--	--	--	--	--	3	23
Knox	2	--	--	--	--	--	--	2	2
Lincoln	73	--	--	--	*1/*	2	--	75	101
Loup	1	--	--	--	--	--	--	1	1
Rock	46	--	--	--	--	--	--	46	56
Sheridan	--	--	--	--	--	--	--	--	1,294
Sioux	--	--	--	--	--	--	--	--	187
Wheeler	--	--	--	--	--	--	--	--	*1/*
Total	351	--	1	--	*1/*	2	--	354	2,410
State total	2,613	23	135	1	9	22	*1/*	2,890	4,972

1/ Less than 500 cubic feet.

Rows and columns may not sum due to rounding.

Table 10.—Growing-stock removals from timberland for industrial roundwood by Forest Survey Unit, county, and species group, Nebraska, 1993

(In thousand cubic feet)

Unit and county	Red-cedar	Spruce	Ponde-rosa pine	Total soft-woods	Soft maple	Hickory	Hack-berry	Ash	Black walnut	Osage-orange
EASTERN UNIT										
Boone	3	--	--	3	1/	--	2	1/	20	--
Buffalo	--	--	--	--	--	--	--	--	1/	--
Burt	--	--	--	--	--	--	--	--	1/	--
Butler	1	--	1	2	1/	1/	1/	1	1/	--
Cass	1	--	1/	1	1	--	1/	4	2	1/
Cedar	--	--	--	--	--	--	--	--	--	--
Colfax	12	--	--	12	--	--	--	--	--	--
Cuming	1	--	--	1	4	--	1/	1	3	--
Dakota	--	--	--	--	--	--	--	--	--	--
Dixon	--	--	--	--	--	--	--	--	--	--
Dodge	1	--	--	1	--	--	1/	--	1/	--
Douglas	--	--	--	--	--	--	--	--	--	--
Franklin	1	--	--	1	--	--	--	2	1/	--
Furnas	1	--	--	1	--	--	--	2	1/	--
Gage	1	--	1/	1	1	--	1/	1	15	1/
Hall	--	--	--	--	--	--	--	--	--	--
Harlan	1	--	--	1	--	--	--	2	1/	--
Howard	1/	--	--	1/	--	--	1/	1/	1/	--
Jefferson	--	--	--	--	--	--	--	--	--	--
Johnson	--	--	--	--	--	1/	1	2	4	--
Lancaster	1	--	1/	1	1	--	1/	1	3	1/
Madison	--	--	--	--	--	--	--	--	--	--
Merrick	60	--	--	60	--	--	1/	1/	1/	--
Nance	1/	--	--	1/	--	--	1/	9	1/	--
Nemaha	--	--	--	--	--	1/	3	5	3	--
Nuckolls	--	--	--	--	--	--	--	--	--	--
Otoe	1	--	1/	1	1	1/	2	1	12	1/
Pawnee	--	--	--	--	--	1/	--	3	3	--
Platte	12	--	--	12	1/	1/	1/	1/	1/	--
Polk	61	--	--	61	1/	1/	1/	1/	1/	--
Richardson	--	--	--	--	--	1/	2	3	14	1/
Saline	--	--	--	--	--	--	--	--	--	--
Sarpy	--	--	--	--	--	--	--	--	--	--
Saunders	1	--	--	1	1/	1/	1/	16	1/	--
Thurston	2	--	--	2	1	--	3	--	5	--
Valley	--	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--
Webster	--	--	--	--	--	--	--	--	--	--
Total	161	--	2	162	9	1/	15	51	88	1/

(Table 10 contined on next page)

(Table 10 continued)

Unit and county	Red-cedar	Spruce	Ponde-rosa pine	Total soft-woods	Soft maple	Hickory	Hack-berry	Ash	Black walnut	Osage-orange
WESTERN UNIT										
Antelope	--	--	--	--	--	--	--	--	--	--
Boyd	1	--	--	1	--	--	--	*1/*	*1/*	--
Brown	3	--	12	15	--	--	*1/*	--	*1/*	--
Dawes	--	--	1,049	1,049	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--
Holt	--	--	--	--	--	--	--	--	--	--
Keya Paha	--	--	42	42	--	--	--	--	--	--
Knox	--	--	--	--	--	--	--	--	--	--
Lincoln	59	*1/*	4	63	*1/*	--	*1/*	*1/*	*1/*	--
Loup	4	--	--	4	--	--	--	--	--	--
Rock	3	--	18	21	--	--	--	--	--	--
Sheridan	--	--	2,659	2,659	--	--	--	--	--	--
Sioux	--	--	384	384	--	--	--	--	--	--
Wheeler	4	--	--	4	--	--	--	--	--	--
Total	75	*1/*	4,168	4,242	*1/*	--	*1/*	1	1	--
State total	235	*1/*	4,169	4,405	9	--	15	51	88	*1/*

(Table 10 contined on next page)

(Table 10 continued)

Unit and county	Cotton-wood	Red oak group	White oak group	Willow	Bass-wood	Elm	Other hard-woods	Total hard-woods	All species
EASTERN UNIT									
Boone	333	--	43	--	--	1/	--	399	402
Buffalo	2	--	3	--	--	--	--	6	6
Burt	93	--	--	--	--	--	--	93	93
Butler	26	1	1/	--	1	1/	1/	30	32
Cass	135	--	5	--	--	4	--	151	151
Cedar	98	--	--	--	--	--	--	98	98
Colfax	247	--	--	--	--	--	--	247	259
Cuming	567	--	1/	1	--	3	--	579	579
Dakota	98	--	--	--	--	--	--	98	98
Dixon	98	--	--	--	--	--	--	98	98
Dodge	65	--	1/	--	--	1/	--	67	67
Douglas	9	--	--	--	--	--	--	9	9
Franklin	504	--	--	--	--	--	--	506	507
Furnas	20	--	--	--	--	1/	--	22	23
Gage	31	--	11	--	--	1/	--	59	60
Hall	141	--	--	--	--	--	--	141	141
Harlan	20	--	--	--	--	1/	--	22	23
Howard	--	--	1/	--	--	1/	--	1/	1
Jefferson	29	--	3	--	--	--	--	33	33
Johnson	25	1	6	--	5	1/	1/	45	45
Lancaster	2	--	1	--	--	1/	--	6	7
Madison	146	--	--	--	--	--	--	146	146
Merrick	87	--	1/	--	--	1/	--	88	148
Nance	247	--	7	--	--	9	--	271	272
Nemaha	34	11	9	--	8	1	1/	74	74
Nuckolls	14	--	--	--	--	--	--	14	14
Otoe	25	9	10	--	--	1/	1/	61	62
Pawnee	67	7	15	--	--	--	1/	95	95
Platte	247	1	1/	--	1	1/	1/	251	263
Polk	75	1/	1/	--	1	1/	1/	78	139
Richardson	44	10	43	--	--	--	1/	116	116
Saline	29	--	3	--	--	--	--	33	33
Sarpy	37	--	--	--	--	--	--	37	37
Saunders	667	1/	22	--	1	21	1/	729	729
Thurston	104	--	38	--	--	--	--	151	153
Valley	17	--	--	--	--	--	--	17	17
Washington	9	--	--	--	--	--	--	9	9
Webster	21	--	--	--	--	--	--	21	21
Total	4,413	39	222	1	19	40	1/	4,897	5,060

(Table 10 contined on next page)

(Table 10 continued)

Unit and county	Cotton-wood	Red oak group	White oak group	Willow	Bass-wood	Elm	Other hard-woods	Total hard-woods	All species
WESTERN UNIT									
Antelope	66	--	--	--	--	--	--	66	66
Boyd	--	--	--	--	--	--	--	*1/*	1
Brown	1	--	1	--	--	--	--	2	17
Dawes	--	--	--	--	--	--	--	--	1,049
Garfield	4	--	--	--	--	--	--	4	4
Holt	368	--	--	--	--	--	--	368	368
Keya Paha	5	--	--	--	--	--	--	5	46
Knox	4	--	--	--	--	--	--	4	4
Lincoln	140	--	--	--	*1/*	4	--	145	208
Loup	9	--	--	--	--	--	--	9	13
Rock	88	--	--	--	--	--	--	88	109
Sheridan	--	--	--	--	--	--	--	--	2,659
Sioux	--	--	--	--	--	--	--	--	384
Wheeler	--	--	--	--	--	--	--	--	4
Total	685	--	1	--	*1/*	4	--	691	4,934
State total	5,097	39	223	1	19	44	*1/*	5,589	9,993

1/ Less than 500 cubic feet.

Rows and columns may not sum due to rounding.

Table 11.—Sawtimber removals from timberland for industrial roundwood production by Forest Survey Unit, county, and species group, Nebraska, 1993

(In thousand board feet) 1/

Unit and county	Red-cedar	Spruce	Ponde-rosa pine	Total soft-woods	Soft maple	Hickory	Hack-berry	Ash	Black walnut	Osage-orange
EASTERN UNIT										
Boone	15	--	--	15	1	--	10	2/	128	--
Buffalo	--	--	--	--	--	--	--	--	1	--
Burt	--	--	--	--	--	--	--	--	2	--
Butler	3	--	7	10	1	2/	1	3	2	--
Cass	3	--	2/	4	3	--	2	19	10	--
Cedar	--	--	--	--	--	--	--	--	--	--
Colfax	53	--	--	53	--	--	--	--	--	--
Cuming	3	--	--	3	25	--	2	4	17	--
Dakota	--	--	--	--	--	--	--	--	--	--
Dixon	--	--	--	--	--	--	--	--	--	--
Dodge	3	--	--	3	--	--	2	--	2	--
Douglas	--	--	--	--	--	--	--	--	--	--
Franklin	7	--	--	7	--	--	--	7	2	--
Furnas	7	--	--	7	--	--	--	7	2	--
Gage	3	--	2/	4	3	--	2	4	97	--
Hall	--	--	--	--	--	--	--	--	--	--
Harlan	7	--	--	7	--	--	--	7	2	--
Howard	1	--	--	1	--	--	2/	2/	1	--
Jefferson	--	--	--	--	--	--	--	--	--	--
Johnson	--	--	--	--	--	2/	4	7	28	--
Lancaster	3	--	2/	4	3	--	2	4	16	--
Madison	--	--	--	--	--	--	--	--	--	--
Merrick	322	--	--	322	--	--	2/	2/	1	--
Nance	1	--	--	1	--	--	2/	45	1	--
Nemaha	--	--	--	--	--	2/	15	22	21	--
Nuckolls	--	--	--	--	--	--	--	--	--	--
Otoe	3	--	2/	4	6	2/	14	4	79	--
Pawnee	--	--	--	--	--	2/	--	15	19	--
Platte	56	--	--	56	1	2/	1	1	1	--
Polk	324	--	--	324	1	2/	1	1	1	--
Richardson	--	--	--	--	--	2/	12	15	87	--
Saline	--	--	--	--	--	--	--	--	--	--
Sarpy	--	--	--	--	--	--	--	--	--	--
Saunders	3	--	--	3	1	2/	1	78	3	--
Thurston	8	--	--	8	7	--	18	--	33	--
Valley	--	--	--	--	--	--	--	--	--	--
Washington	--	--	--	--	--	--	--	--	--	--
Webster	--	--	--	--	--	--	--	--	--	--
Total	824	--	8	832	53	1	86	246	556	--

(Table 11 continued on next page)

(Table 11 continued)

Unit and county	Red-cedar	Spruce	Ponde-rosa pine	Total soft-woods	Soft maple	Hickory	Hack-berry	Ash	Black walnut	Osage-orange
WESTERN UNIT										
Antelope	--	--	--	--	--	--	--	--	--	--
Boyd	3	--	--	3	--	--	--	1	1	--
Brown	13	--	63	77	--	--	1	--	1	--
Dawes	--	--	5,606	5,606	--	--	--	--	--	--
Garfield	--	--	--	--	--	--	--	--	--	--
Holt	--	--	--	--	--	--	--	--	--	--
Keya Paha	--	--	222	222	--	--	--	--	--	--
Knox	--	--	--	--	--	--	--	--	--	--
Lincoln	268	1	19	288	*2/*	--	1	1	1	--
Loup	23	--	--	23	--	--	--	--	--	--
Rock	13	--	95	108	--	--	--	--	--	--
Sheridan	--	--	14,209	14,209	--	--	--	--	--	--
Sioux	--	--	2,054	2,054	--	--	--	--	--	--
Wheeler	23	--	--	23	--	--	--	--	--	--
Total	343	1	22,268	22,612	*2/*	--	2	3	4	--
State total	1,166	1	22,277	23,444	53	1	88	248	560	--

(Table 11 continued on next page)

(Table 11 continued)

Unit and county	Cotton-wood	Red oak group	White oak group	Willow	Bass-wood	Elm	Other hard-woods	Total hard-woods	All species
EASTERN UNIT									
Boone	1,966	--	166	--	--	1	--	2,273	2,288
Buffalo	12	--	13	--	--	--	--	26	26
Burt	549	--	--	--	--	--	--	551	551
Butler	154	3	2	--	8	1	2/	175	184
Cass	730	--	19	--	--	25	--	807	811
Cedar	578	--	--	--	--	--	--	578	578
Colfax	1,457	--	--	--	--	--	--	1,457	1,510
Cuming	3,343	--	2	6	--	15	--	3,414	3,416
Dakota	578	--	--	--	--	--	--	578	578
Dixon	578	--	--	--	--	--	--	578	578
Dodge	383	--	2	--	--	2	--	392	395
Douglas	36	--	--	--	--	--	--	36	36
Franklin	2,971	--	--	--	--	--	--	2,981	2,988
Furnas	116	--	--	--	--	2	--	128	135
Gage	184	--	43	--	--	1	--	333	337
Hall	830	--	--	--	--	--	--	830	830
Harlan	116	--	--	--	--	2	--	128	135
Howard	--	--	2/	--	--	1	--	2	3
Jefferson	173	--	12	--	--	--	--	186	186
Johnson	145	4	25	--	32	2	2/	247	247
Lancaster	9	--	2	--	--	1	--	36	40
Madison	859	--	--	--	--	--	--	859	859
Merrick	499	--	2/	--	--	1	--	502	824
Nance	1,457	--	25	--	--	50	--	1,577	1,578
Nemaha	202	41	36	--	48	4	2/	389	389
Nuckolls	84	--	--	--	--	--	--	84	84
Otoe	135	36	38	--	--	1	2/	312	316
Pawnee	398	26	58	--	--	--	2/	515	515
Platte	1,457	3	2	--	8	1	2/	1,475	1,531
Polk	428	1	2	--	8	1	2/	444	769
Richardson	260	39	164	--	--	--	2/	577	577
Saline	173	--	12	--	--	--	--	186	186
Sarpy	150	--	--	--	--	--	--	150	150
Saunders	3,934	1	84	--	8	124	2/	4,233	4,235
Thurston	612	--	146	--	--	--	--	817	825
Valley	92	--	--	--	--	--	--	92	92
Washington	36	--	--	--	--	--	--	36	36
Webster	126	--	--	--	--	--	--	126	126
Total	25,810	153	853	6	111	235	1	28,111	28,943

(Table 11 continued on next page)

(Table 11 continued)

Unit and county	Cotton-wood	Red oak group	White oak group	Willow	Bass-wood	Elm	Other hard-woods	Total hard-woods	All species
WESTERN UNIT									
Antelope	388	--	--	--	--	--	--	388	388
Boyd	--	--	--	--	--	--	--	3	5
Brown	7	--	3	--	--	--	--	13	90
Dawes	--	--	--	--	--	--	--	--	5,606
Garfield	23	--	--	--	--	--	--	23	23
Holt	2,169	--	--	--	--	--	--	2,169	2,169
Keya Paha	29	--	--	--	--	--	--	29	251
Knox	26	--	--	--	--	--	--	26	26
Lincoln	824	--	--	--	*2/*	25	--	853	1,141
Loup	46	--	--	--	--	--	--	46	69
Rock	520	--	--	--	--	--	--	520	629
Sheridan	--	--	--	--	--	--	--	--	14,209
Sioux	--	--	--	--	--	--	--	--	2,054
Wheeler	--	--	--	--	--	--	--	--	23
Total	4,032	--	3	--	*2/*	25	--	4,069	26,682
State total	29,842	153	856	6	111	259	1	32,180	55,624

1/ International 1/4-inch rule.

2/ Less than 500 board feet.

Rows and columns may not sum due to rounding.

Table 12.—Residues produced at primary wood-using mills by type of material, type of use, and Forest Survey Unit, Nebraska, 1993

(In thousand tons, greeen weight)

Survey Unit and type of use	Wood residues							
	Total		Coarse 1/		Fine 2/		Bark	
	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood
EASTERN UNIT								
Industrial fuel-mill	1.48	0.64	0.94	0.4	0.55	0.23	0.24	0.17
Domestic fuel	*4/*	0.13	*4/*	0.13	--	--	--	*4/*
Miscellaneous 3/	0.38	61.79	0.24	38.43	0.14	23.36	0.06	16.94
Not used	0.12	12.63	0.08	8.94	0.04	3.69	0.02	3.19
Total	1.99	75.19	1.27	47.9	0.72	27.28	0.32	20.3
WESTERN UNIT								
Industrial fuel-sold	9.38	--	5.93	--	3.45	--	2.52	--
Domestic fuel	0.18	0.09	0.18	0.09	*4/*	*4/*	*4/*	0.03
Miscellaneous 3/	0.73	0.63	0.48	0.59	0.25	0.04	0.24	0.19
Not used	0.53	1.88	0.32	1.14	0.21	0.74	0.11	0.56
Total	10.82	2.61	6.91	1.82	3.91	0.79	2.87	0.78
ALL UNITS								
Industrial fuel-mill	1.48	0.64	0.94	0.4	0.55	0.23	0.24	0.17
Industrial fuel-sold	9.38	--	5.93	--	3.45	--	2.52	--
Domestic fuel	0.18	0.23	0.18	0.22	*4/*	*4/*	*4/*	0.03
Miscellaneous 3/	1.11	62.42	0.72	39.02	0.39	23.4	0.3	17.12
Not used	0.66	14.52	0.41	10.09	0.25	4.43	0.13	3.75
Total	12.81	77.8	8.18	49.73	4.63	28.07	3.19	21.07

1/ Suitable for chipping such as slabs, edgings, veneer cores, etc.

2/ Not suitable for chipping such as sawdust, veneer clippings, stc.

3/ Livestock bedding, mulch, small dimension, and speciality items.

4/ Less than 10 tons.

Rows and columns may not sum due to rounding.

The United States Department of Agriculture (USDA) prohibits discrimination in its programs on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, and marital or familial status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means of communication of program information (braille, large print, audiotape, etc.) should contact the USDA Office of Communications at (202) 720-2791.

To file a complaint, write the Secretary of Agriculture, U.S. Department of Agriculture, Washington, DC 20250, or call 202-720-7327 (voice), or 202-720-1127 (TDD). USDA is an equal employment opportunity employer.

Printed on recycled, recyclable paper.

☆U.S. GOVERNMENT PRINTING OFFICE: 1996 - 555-062/40061

Hackett, Ronald L.; Adams, Dennis M.
1996. **Nebraska timber industry—an assessment of timber product output and use, 1993**. Resour. Bull. NC-177. St. Paul, MN: U.S. Department of Agriculture, Forest Service, North Central Forest Experiment Station. 35 p.

Reports findings of a survey of all primary wood-using mills in Nebraska in 1993 and compares those findings with earlier surveys. Reports production and receipts of industrial roundwood by product, species, and county. Also reports the quantity, type, and disposition of wood and bark residues generated by Nebraska's primary wood-using industry.

KEY WORDS: Bark, mill, production, roundwood, residues, saw logs, veneer logs.

Our job at the North Central Forest Experiment Station is discovering and creating new knowledge and technology in the field of natural resources and conveying this information to the people who can use it. As a new generation of forests emerges in our region, managers are confronted with two unique challenges: (1) Dealing with the great diversity in composition, quality, and ownership of the forests, and (2) Reconciling the conflicting demands of the people who use them. Helping the forest manager meet these challenges while protecting the environment is what research at North Central is all about.